

Safety Data Sheet

According to Regulation (EC) No. 1272/2008 (CLP), as amended by Commission Regulation (EU) 2019/521 and Commission Delegated Regulation (EU) 2020/217, and (EC) No. 1907/2006 (REACH)

Initial preparation date: 06.07.2017

Revision date: 01.12.2022

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HOT VULCANIZING FLUID "BLACK-CEMENT"

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product Name: HOT VULCANIZING FLUID "BLACK-CEMENT"

Product code: 61425-67, 61426-67

Additional information: Rev 10

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: For tyre hot cure repair

Uses advised against: Not determined or not applicable.

Reasons why uses advised against: Not determined or not applicable.

1.3 Details of the manufacturer/supplier of the safety data sheet

Supplier:

European Union

SCHRADER S.A.S

BP 29 - 48 rue de Salins

25301 Pontarlier Cedex, France

+33 (0)3 81 38 56 56

resale.info@schrader-pacific.fr

www.schrader-pacific.fr

1.4 Emergency telephone number:

European Union

CHEMTREC

France +(33)-975181407

Germany 0800-181-7059 & (Frankfurt) +(49)- 69643508409

Italy 800-789-767 & (Milan) +(39)-0245557031

Spain 900-868538;(Barcelona) + (34) 931768545

Portugal +(351)-308801773

Netherlands +(31)-858880596

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture:

Classification according to Regulation (EC) No. 1272/2008 (CLP):

Flammable liquids, category 2

Skin irritation, category 2

Specific target organ toxicity - single exposure, category 3, central nervous system

Chronic aquatic hazard, category 2

Hazard-determining components of labeling:

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

Heptane

2.2 Label elements

Hazard pictograms:



Signal word: Danger

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Hazard statements:

- H225 Highly flammable liquid and vapor.
- H315 Causes skin irritation.
- H336 May cause drowsiness or dizziness.
- H411 Toxic to aquatic life with long lasting effects.
- EUH208 Contains Benzothiazole Disulfide. May produce an allergic reaction.

Precautionary statements:

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P240 Ground and bond container and receiving equipment.
- P241 Use explosion-proof [electrical/ventilating/lighting] equipment.
- P242 Use non-sparking tools.
- P243 Take action to prevent static discharges.
- P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
- P264 Wash skin thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.
- P272 Contaminated work clothing should not be allowed out of the workplace.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P273 Avoid release to the environment.
- P370+P378 In case of fire: Use agents recommended in Section 5 to extinguish.
- P321 Specific treatment (see supplemental first aid instructions on this label).
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
- P362+P364 Take off contaminated clothing and wash it before reuse.
- P332+P313 If skin irritation occurs: Get medical advice/attention
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P312 Call a POISON CENTER/doctor/physician if you feel unwell.
- P391 Collect spillage
- P403+P235 Store in a well ventilated place. Keep cool.
- P405 Store locked up.
- P403+P233 Store in a well ventilated place. Keep container tightly closed.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental Label Information:

- EUH208 Contains Benzothiazole Disulfide. May produce an allergic reaction.

2.3 Other hazards: None known

SECTION 3: Composition/information on ingredients

3.1 Substance: Not applicable.

3.2 Mixture:

Identification	Name	Classification according to Regulation (EC) No. 1272/2008 (CLP)	Weight %
CAS number: 64742-49-0 EC number: 265-151-9 REACH number: 01-2119475515-33-0015	Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Stot SE 3; H336 Asp. Tox. 1; H304 Aquatic Chronic 2; H411 Skin Irrit. 2 ; H315 Flam. Liq. 2; H225	60-90
CAS number: 142-82-5 EC number: 205-563-8	Heptane	Asp. Tox. 1; H304 Skin Irrit. 2 ; H315 Stot SE 3; H336 Flam. Liq. 2; H225 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	<10

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CAS number: 1333-86-4 EC number: 215-609-9	Carbon Black	Not classified	<5
CAS number: 7704-34-9 EC number: 231-722-6	Sulfur	Skin Irrit. 2 ; H315	<5
CAS number: 57-11-4 EC number: 200-313-4	Stearic acid	Not classified	<5
CAS number: 1344-95-2 EC number: 215-710-8	Calcium Silicate	Eye Irrit. 2; H319 Stot SE 3; H335	<5
CAS number: 64742-65-0 EC number: 265-169-7	Distillates, Petroleum, Solvent- Dewaxed Heavy Paraffinic	Not classified	<5
CAS number: 64742-52-5 EC number: 265-155-0 REACH number: 01-2119467170-45-0055	Hydrotreated Heavy Naphthenic Distillates	Not classified	<5
CAS number: 64742-54-7 EC number: 265-157-1	Hydrotreated Heavy Paraffinic Distillates	Not classified	<5
CAS number: 64742-53-6 EC number: 265-156-6	Hydrotreated Light Naphthenic Distillates	Not classified	<5
CAS number: 1314-13-2 EC number: 215-222-5 REACH number: 01-2119463881-32-0039	Zinc oxide	Aquatic Acute 1; H400 Aquatic Chronic 1; H410	<5
CAS number: 120-78-5 EC number: 204-424-9	Benzothiazole Disulfide	Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 EUH031	<1
CAS number: 68476-34-6 EC number: 270-676-1	Diesel Fuel No. 2	Carc. 2; H351 Flam. Liq. 3; H226 Asp. Tox. 1; H304 Skin Irrit. 2 ; H315 Acute Tox. 4; H332 Aquatic Chronic 2; H411 Eye irrit. 2; H319	<0.1

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Additional information:

According to Note L of the European Commission Directive 67/548/EEC, the classification as a carcinogen for the petroleum distillate substances in this product do not apply because it can be shown that the substances contain less than 3% DMSO extract as measured by IP 346.

Carbon black is classified as a carcinogen only in its respirable form. Since the carbon black in this product is not respirable, the product itself is not classified as a carcinogen in the form presented.

Independent testing of Tech International products containing zinc oxide demonstrate that zinc is not appreciably leachable, and therefore does not contribute to an aquatic hazard in the finished form, or levels present in this product.

Full Text of H and EUH statements: See section 16

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes:

Not determined or not available.

Following inhalation:

If inhaled, remove person to fresh air and place in a position comfortable for breathing. Keep person at rest. If breathing is difficult, administer oxygen. If breathing has stopped, provide artificial respiration. If experiencing respiratory symptoms, seek medical advice/attention

Following skin contact:

Remove contaminated clothing and shoes. Rinse skin with copious amounts of water [shower] for several minutes. Launder contaminated clothing before reuse. If symptoms develop or persist, seek medical advice/attention

Following eye contact:

Rinse eyes with plenty of water for several minutes. Remove contact lenses if present and easy to do so. Protect unexposed eye. If symptoms develop or persist, seek medical advice/attention

Following ingestion:

If swallowed, DO NOT induce vomiting unless told to do so by a physician or poison control center. Rinse mouth with water. Never give anything by mouth to an unconscious person. If spontaneous vomiting occurs, place on the left side with head down to prevent aspiration of liquid into the lungs. If symptoms develop or persist, seek medical advice/attention

4.2 Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

Product is highly flammable. Exposure to sources of ignition may cause physical injury

Skin contact may result in redness, pain, burning and inflammation

Inhalation may have adverse effects on the central nervous system. Symptoms may include drowsiness, dizziness, headache, nausea and lowering of consciousness. Acute overexposure via inhalation may result in respiratory distress, confusion and unconsciousness

Delayed symptoms and effects:

Effects are dependent on exposure (dose, concentration, contact time).

4.3 Indication of any immediate medical attention and special treatment needed

Specific treatment:

Skin/eye burns require immediate treatment.

Overexposure via inhalation requires urgent medical treatment.

Notes for the doctor:

Treat symptomatically.

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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media:

Use Water (fog only), dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam.

Unsuitable extinguishing media:

Do not use a water stream as an extinguisher.

5.2 Special hazards arising from the substance or mixture:

Highly flammable liquid. Will be easily ignitable by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapor explosion hazard indoors, outdoors or in sewers. Runoff to sewer may create fire or explosion hazard. Containers may explode when heated. Inhalation or contact with material may irritate or burn skin and eyes. Fire may produce irritating, corrosive and/or toxic gases. Vapors may cause dizziness or suffocation.

5.3 Advice for firefighters

Personal protection equipment:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full-face piece operated in positive pressure mode.

Special precautions:

Evacuate non-essential personnel. Ventilate closed spaces before entering. Consider initial evacuation for 300 meters in all directions. If tank/rail car is involved in the fire, ISOLATE for 800 meters in all directions. Fight fire from a maximum distance. Move containers from fire area if you can do it without risk. Use water spray/fog for cooling fire exposed containers. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. Always stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles. If this is impossible, withdraw from area and let fire burn. Stand by, at a safe distance, with extinguisher ready for possible re-ignition. A vapor-suppressing foam may be used to reduce vapors. Avoid unnecessary run-off of extinguishing media which may cause pollution. Do not handle damaged containers unless specialized to do so. Avoid contact with skin, eyes, hair and clothing. Do not breathe fumes/gas/mists/aerosols/vapors/dusts.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Evacuate unnecessary personnel. Ventilate area. Extinguish any sources of ignition. All equipment used when handling the product must be grounded. Wear recommended personal protective equipment (see Section 8). Avoid contact with skin, eyes and clothing. Avoid breathing mist, vapor, dust, fume and spray. Do not walk through spilled material. Wash thoroughly after handling.

6.2 Environmental precautions:

Prevent further leakage or spillage if safe to do so. Prevent from reaching drains, sewers and waterways. Discharge into the environment must be avoided.

6.3 Methods and material for containment and cleaning up:

Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Stop leak if you can do it without risk. A vapor-suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

6.4 Reference to other sections:

For personal protective equipment see Section 8. For disposal see Section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating and lighting equipment. Take action to prevent static discharges.

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Handle containers with caution. Use appropriate personal protective equipment (see Section 8). Use only with adequate ventilation. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Avoid contact with skin, eyes and clothing. Wash affected areas thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use.

7.2 Conditions for safe storage, including any incompatibilities:

Store in cool, dry, well-ventilated location out of direct sunlight. Keep away from food and beverages. Protect from freezing and physical damage. Store away from heat, open flames and other sources of ignition. Keep container tightly sealed. Store away from incompatible materials (See Section 10).

7.3 Specific end use(s):

Refer to Section 1 (Recommended Use)

SECTION 8: Exposure controls/personal protection



8.1 Control parameters

Only those substances with limit values have been included below.

Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
Latvia	Sulfur	7704-34-9	8-hour TWA: 6 mg/m ³
	Heptane	142-82-5	8-hour TWA: 350 mg/m ³ (85 ppm)
	Heptane	142-82-5	15-minute STEL: 2085 mg/m ³ (500 ppm)
	Hydrotreated Light Naphthenic Distillates	64742-53-6	8-hour TWA: 5 mg/m ³ (Mineral oil)
	Zinc oxide	1314-13-2	8-hour TWA: 0.5 mg/m ³
	Hydrotreated Heavy Paraffinic Distillates	64742-54-7	8-hour TWA: 5 mg/m ³ (mineral oil)
	Distillates, Petroleum, Solvent-Dewaxed Heavy Paraffinic	64742-65-0	8-hour TWA: 5 mg/m ³ (mineral oil)
	Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	64742-49-0	8-hour TWA: 10 mg/m ³ (naphtha)
Bulgaria	Distillates, Petroleum, Solvent-Dewaxed Heavy Paraffinic	64742-65-0	TWA: 5 mg/m ³ (Oil - mineral, petroleum)
	Hydrotreated Heavy Naphthenic Distillates	64742-52-5	TWA: 5.0 mg/m ³
	Hydrotreated Heavy Paraffinic Distillates	64742-54-7	TWA: 5.0 mg/m ³ (Oil - Mineral, petroleum)
	Heptane	142-82-5	TWA: 1600 mg/m ³
	Zinc oxide	1314-13-2	15-minute STEL: 10.0 mg/m ³
	Hydrotreated Light Naphthenic Distillates	64742-53-6	TWA: 5 mg/m ³ (Oil - mineral, petroleum)
	Zinc oxide	1314-13-2	TWA: 5.0 mg/m ³
	Hydrotreated Light Naphthenic Distillates	64742-53-6	TWA: 3 mg/m ³

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Country (Legal Basis)	Substance	Identifier	Permissible concentration
Poland	Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	64742-49-0	STEL: 1500 mg/m ³
	Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	64742-49-0	TWA: 500 mg/m ³
	Distillates, Petroleum, Solvent-Dewaxed Heavy Paraffinic	64742-65-0	8-hour TWA: 5 mg/m ³ (Highly refined mineral oils with the exception of cutting fluids, inhalable fraction)
	Hydrotreated Heavy Paraffinic Distillates	64742-54-7	8-hour TWA (NDS): 5 mg/m ³ (Highly refined mineral oils with the exception of cutting fluids, inhalable fraction)
	Hydrotreated Heavy Naphthenic Distillates	64742-52-5	8-hour TWA (NDS): 5 mg/m ³ (Highly refined mineral oils with the exception of cutting fluids, Inhalable fraction)
	Carbon Black	1333-86-4	Dz.U.Poz. 817/2014, Annex 1: TWA (NDS) 4.0 mg/m ³ (8 hr)
	Heptane	142-82-5	8-hour TWA (NDS): 1200 mg/m ³
	Hydrotreated Light Naphthenic Distillates	64742-53-6	8-hour TWA: 5 mg/m ³ (Highly refined mineral oils with the exception of cutting fluids, inhalable fraction)
	Heptane	142-82-5	15-minute STEL (NDSCh): 2000 mg/m ³
	Zinc oxide	1314-13-2	8-hour TWA (NDS): 5 mg/m ³ (Inhalable fraction, as Zn)
	Zinc oxide	1314-13-2	15-minute STEL (NDSCh): 10 mg/m ³ (Inhalable fraction, as Zn)
Lithuania	Sulfur	7704-34-9	8-hour TWA: 6 mg/m ³
	Stearic acid	57-11-4	8-hour TWA: 5 mg/m ³
	Distillates, Petroleum, Solvent-Dewaxed Heavy Paraffinic	64742-65-0	8-hour TWA: 1 mg/m ³ (Oil mist, including smoke)
	Hydrotreated Heavy Paraffinic Distillates	64742-54-7	8-hour TWA: 1 mg/m ³ (Oil mist, including smoke)
	Distillates, Petroleum, Solvent-Dewaxed Heavy Paraffinic	64742-65-0	15-minute STEL: 3 mg/m ³ (Oil mist, including smoke)
	Hydrotreated Heavy Paraffinic Distillates	64742-54-7	15-minute STEL: 3 mg/m ³ (Oil mist, including smoke)
	Hydrotreated Heavy Naphthenic Distillates	64742-52-5	8-hour TWA: 1 mg/m ³ (Oil mist, including smoke)
	Hydrotreated Heavy Naphthenic Distillates	64742-52-5	15-minute STEL: 3 mg/m ³ (Oil mist, including smoke)
	Heptane	142-82-5	8-hour TWA: 2085 mg/m ³ (500 ppm)
	Heptane	142-82-5	15-minute STEL: 3128 mg/m ³ (750 ppm)
	Hydrotreated Light Naphthenic Distillates	64742-53-6	8-hour TWA: 1 mg/m ³ (Oil mist, including smoke)
	Hydrotreated Light Naphthenic Distillates	64742-53-6	15-minute STEL: 3 mg/m ³ (Oil mist, including smoke)
	Zinc oxide	1314-13-2	8-hour TWA: 5 mg/m ³
	Calcium Silicate	1344-95-2	8-hour TWA: 10 mg/m ³ (dust, inhalable fraction)

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Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Calcium Silicate	1344-95-2	8-hour TWA: 5 mg/m ³ (dust, respirable fraction)
Czech Republic	Distillates, Petroleum, Solvent-Dewaxed Heavy Paraffinic	64742-65-0	8-hour TWA: 5 mg/m ³ (Mineral oils, aerosol)
	Distillates, Petroleum, Solvent-Dewaxed Heavy Paraffinic	64742-65-0	Ceiling limit: 10 mg/m ³ (Mineral oils, aerosol)
	Distillates, Petroleum, Solvent-Dewaxed Heavy Paraffinic	64742-65-0	8-hour TWA: 200 mg/m ³ (Solvent naphtha)
	Hydrotreated Heavy Naphthenic Distillates	64742-52-5	8-hour TWA: 5 mg/m ³ (Mineral oils, aerosol)
	Hydrotreated Heavy Paraffinic Distillates	64742-54-7	The ceiling limit (NPK-P): 10 mg/m ³ (Mineral oils, aerosol)
	Hydrotreated Heavy Naphthenic Distillates	64742-52-5	8-hour TWA: 200 mg/m ³ (Solvent naphtha)
	Hydrotreated Heavy Paraffinic Distillates	64742-54-7	8-hour TWA: 5 mg/m ³ (Mineral oils, aerosol)
	Distillates, Petroleum, Solvent-Dewaxed Heavy Paraffinic	64742-65-0	Ceiling limit: 1000 mg/m ³ (Solvent naphtha)
	Hydrotreated Heavy Naphthenic Distillates	64742-52-5	Ceiling limit (NPK-P): 10 mg/m ³ (Mineral oils, aerosol)
	Hydrotreated Heavy Naphthenic Distillates	64742-52-5	Ceiling limit (NPK-P): 1000 mg/m ³ (Solvent naphtha)
	Carbon Black	1333-86-4	Government Decree 361/2007 Sb.: TWA 2.0 mg/m ³ (8 hr)
	Heptane	142-82-5	8-hour TWA: 1000 mg/m ³
	Heptane	142-82-5	Ceiling limit (NPK-P): 2000 mg/m ³
	Hydrotreated Light Naphthenic Distillates	64742-53-6	8-hour TWA: 5 mg/m ³ (Mineral oils, aerosol)
	Hydrotreated Light Naphthenic Distillates	64742-53-6	Ceiling limit: 10 mg/m ³ (Mineral oils, aerosol)
	Hydrotreated Light Naphthenic Distillates	64742-53-6	8-hour TWA: 200 mg/m ³ (Solvent naphtha)
	Hydrotreated Light Naphthenic Distillates	64742-53-6	Ceiling limit: 1000 mg/m ³ (Solvent naphtha)
	Zinc oxide	1314-13-2	8-hour TWA: 2 mg/m ³ (as Zn)
	Zinc oxide	1314-13-2	Ceiling limit (NPK-P): 5 mg/m ³ (Fumes)
	Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	64742-49-0	Ceiling limit: 1000 mg/m ³ (solvent naphtha)
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	64742-49-0	8-hour TWA: 200 mg/m ³ (solvent naphtha)	
Belgium	Stearic acid	57-11-4	8-hour TWA: 10 mg/m ³ (as stearates)
	Diesel Fuel No. 2	68476-34-6	8-hour TWA: 100 mg/m ³
	Carbon Black	1333-86-4	Exposure Limit Value: TWA 3.5 mg/m ³ (8 hr)
	Distillates, Petroleum, Solvent-Dewaxed Heavy Paraffinic	64742-65-0	8-hour TWA: 5 mg/m ³ (Mineral oils, mist)
	Distillates, Petroleum, Solvent-Dewaxed Heavy Paraffinic	64742-65-0	15-minute STEL: 10 mg/m ³ (Mineral oils, mist)
	Hydrotreated Heavy Naphthenic Distillates	64742-52-5	8-hour TWA: 5 mg/m ³
	Hydrotreated Heavy Paraffinic Distillates	64742-54-7	8-Hour TWA: 5 mg/m ³ (Mineral oils, mist)

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Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Hydrotreated Heavy Naphthenic Distillates	64742-52-5	15-minute STEL: 10 mg/m ³
	Hydrotreated Heavy Paraffinic Distillates	64742-54-7	15-minute STEL: 10 mg/m ³ (Mineral oils, mist)
Belgium	Calcium Silicate	1344-95-2	8-hour TWA: 10 mg/m ³ (synthetic)
	Heptane	142-82-5	8-hour TWA: 400 ppm (1664 mg/m ³)
	Hydrotreated Light Naphthenic Distillates	64742-53-6	8-hour TWA: 5 mg/m ³ (Mineral oils [mist])
	Hydrotreated Light Naphthenic Distillates	64742-53-6	15-minute STEL: 10 mg/m ³ (Mineral oils [mist])
	Heptane	142-82-5	15-minute STEL: 500 ppm (2085 mg/m ³)
	Zinc oxide	1314-13-2	8-hour TWA: 2 mg/m ³ (respirable fraction)
	Zinc oxide	1314-13-2	15-minute STEL: 10 mg/m ³ (respirable fraction)
Ireland	Stearic acid	57-11-4	8-hour TWA: 10 mg/m ³ (as stearates, except lead stearate)
	Diesel Fuel No. 2	68476-34-6	8-hour TWA: 100 mg/m ³
	Carbon Black	1333-86-4	2016 Code of Practice for Chemical Agents Regulations 2001: TWA 3.0 mg/m ³ (8 hr) OEL
	Distillates, Petroleum, Solvent-Dewaxed Heavy Paraffinic	64742-65-0	8-hour TWA: 5 mg/m ³ (Mineral oil, pure, highly and severely refined, inhalable fraction)
	Hydrotreated Heavy Paraffinic Distillates	64742-54-7	8-hour OEL (TWA) is: 5 mg/m ³ (Mineral oil, pure, highly and severely refined; Inhalable fraction)
	Hydrotreated Heavy Naphthenic Distillates	64742-52-5	8-hour OEL (TWA): 5 mg/m ³ (Mineral oil, pure, highly and severely refined; Inhalable fraction)
	Calcium Silicate	1344-95-2	8-hour TWA: 1 mg/m ³ (synthetic non fibrous)
	Hydrotreated Light Naphthenic Distillates	64742-53-6	8-hour TWA: 5 mg/m ³ (Mineral oil, pure, highly and severely refined, inhalable fraction)
	Heptane	142-82-5	8-hour OEL (TWA): 500 ppm (2085 mg/m ³)
	Zinc oxide	1314-13-2	8-Hour TWA: 2 mg/m ³ (fume or respirable dust)
	Zinc oxide	1314-13-2	15-Minute STEL: 10 mg/m ³ (fume or respirable dust)
Romania	Sulfur	7704-34-9	15-min STEL: 6 mg/m ³ (dust)
	Distillates, Petroleum, Solvent-Dewaxed Heavy Paraffinic	64742-65-0	8-hour TWA: 5 mg/m ³ (Mineral oils)
	Hydrotreated Heavy Paraffinic Distillates	64742-54-7	8-Hour TWA: 5 mg/m ³ (Mineral oils)
	Hydrotreated Heavy Paraffinic Distillates	64742-54-7	15-minute STEL: 10 mg/m ³ (Mineral oils)
	Distillates, Petroleum, Solvent-Dewaxed Heavy Paraffinic	64742-65-0	15-minute STEL: 10 mg/m ³ (Mineral oils)

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HOT VULCANIZING FLUID "BLACK-CEMENT"

Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Hydrotreated Heavy Naphthenic Distillates	64742-52-5	8-hour TWA: 5 mg/m ³ (Mineral oils)
	Hydrotreated Heavy Naphthenic Distillates	64742-52-5	15-minute STEL: 10 mg/m ³ (Mineral oils)
	Heptane	142-82-5	8-hour TWA: 2085 mg/m ³ (500 ppm)
	Hydrotreated Light Naphthenic Distillates	64742-53-6	8-hour TWA: 5 mg/m ³ (Mineral oils)
	Hydrotreated Light Naphthenic Distillates	64742-53-6	15-minute STEL: 10 mg/m ³ (Mineral oils)
	Zinc oxide	1314-13-2	8-hour TWA: 5 mg/m ³ (Fumes or respirable dust)
	Zinc oxide	1314-13-2	15-minute STEL: 10 mg/m ³ (Fumes or respirable dust)
	Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	64742-49-0	8-hour TWA: 100 mg/m ³ (solvent naphtha)
	Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	64742-49-0	15-minute STEL: 200 mg/m ³ (solvent naphtha)
Italy	Stearic acid	57-11-4	8-hour TWA: 3 mg/m ³ [Stearates (except stearates of toxic metals), Respirable fraction]
	Stearic acid	57-11-4	8-hour TWA: 10 mg/m ³ [Stearates (except stearates of toxic metals), Inhalable fraction]
	Calcium Silicate	1344-95-2	8-hour TWA: 10 mg/m ³ (particles, insoluble or poorly soluble, not otherwise specified, inhalable particles)
	Calcium Silicate	1344-95-2	8-hour TWA: 3 mg/m ³ (particles, insoluble or poorly soluble, not otherwise specified, respirable particles)
	Carbon Black	1333-86-4	Legislative Decree n.81: TWA 3.0 mg/m ³ (8 hr)
	Distillates, Petroleum, Solvent-Dewaxed Heavy Paraffinic	64742-65-0	8-hour TWA: 5 mg/m ³ (Mineral oil, pure, highly and severely refined, inhalable fraction)
	Hydrotreated Heavy Naphthenic Distillates	64742-52-5	8-hour TWA: 5 mg/m ³ (Mineral oil, excluding metal working fluids, pure, highly and severely refined; Inhalable fraction)
	Hydrotreated Heavy Paraffinic Distillates	64742-54-7	8-hour TWA: 5 mg/m ³ (Mineral oil, excluding metal working fluids, pure, highly and severely refined; Inhalable fraction)
	Hydrotreated Light Naphthenic Distillates	64742-53-6	8-hour TWA: 5 mg/m ³ (Mineral oil, excluding metal working fluids, pure, highly and severely refined, inhalable fraction)
	Heptane	142-82-5	8-hour TWA: 500 ppm (2085 mg/m ³)
	Zinc oxide	1314-13-2	8-hour TWA: 2 mg/m ³ (Respirable fraction)
	Zinc oxide	1314-13-2	15-minute STEL: 10 mg/m ³ (Respirable fraction)

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Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Diesel Fuel No. 2	68476-34-6	8-hour TWA: 100 mg/m ³ (as total hydrocarbons, inhalable fraction and vapor)
Hungary	Distillates, Petroleum, Solvent-Dewaxed Heavy Paraffinic	64742-65-0	8-hour TWA: 5 mg/m ³ (Oil mist [mineral oil])
	Hydrotreated Heavy Paraffinic Distillates	64742-54-7	8-hour TWA (AK Value): 5 mg/m ³ (Oil mist, mineral oil)
	Hydrotreated Heavy Naphthenic Distillates	64742-52-5	Ceiling Limit (MK Value): 5 mg/m ³ [Oil smog (mineral oil)]
	Heptane	142-82-5	8-hour TWA (ÁK Value): 2000 mg/m ³
	Heptane	142-82-5	STEL: 8000mg/m ³
	Hydrotreated Light Naphthenic Distillates	64742-53-6	Ceiling limit: 5 mg/m ³ (Oil smog [mineral oil])
	Zinc oxide	1314-13-2	8-hour TWA (ÁK Value): 5 mg/m ³ (Respirable)
	Zinc oxide	1314-13-2	60-minute STEL (CK Value): 20 mg/m ³ (Respirable)
Portugal	Stearic acid	57-11-4	8-hour Exposure Limit: 10 mg/m ³ (as stearates)
	Diesel Fuel No. 2	68476-34-6	8-hour TWA: 100 mg/m ³ (as total hydrocarbons, inhalable fraction and steam)
	Calcium Silicate	1344-95-2	TWA: 10 mg/m ³ (synthetic, non fibrous)
	Carbon Black	1333-86-4	VLE: 3.5 mg/m ³ (8 hr)
	Distillates, Petroleum, Solvent-Dewaxed Heavy Paraffinic	64742-65-0	8-hour exposure limit: 5 mg/m ³ (mineral oil, excluding metal transformation fluids, pure, highly and strongly refined, inhalable fraction)
	Hydrotreated Heavy Naphthenic Distillates	64742-52-5	8-hour exposure limit: 5 mg/m ³
	Hydrotreated Heavy Paraffinic Distillates	64742-54-7	8-hour exposure limit: 5 mg/m ³ (mineral oil, excluding metal transformation fluids, pure, highly and strongly refined, inhalable fraction)
	Hydrotreated Heavy Naphthenic Distillates	64742-52-5	Short-term exposure limit: 10 mg/m ³
	Hydrotreated Light Naphthenic Distillates	64742-53-6	8-hour TWA: 5 mg/m ³ (Mineral oil, excluding metal working fluids, pure, highly and severely refined, inhalable fraction)
	Heptane	142-82-5	Decree-Law No. 24/2012 8-hour TWA: 500 ppm (2085 mg/m ³)
	Heptane	142-82-5	NP 1796-2007 8-hour exposure limit: 400 ppm
	Heptane	142-82-5	NP 1796-2007 Short-term exposure limit: 500 ppm
	Zinc oxide	1314-13-2	8-hour exposure limit: 2 mg/m ³
	Zinc oxide	1314-13-2	Short-term exposure limit: 10 mg/m ³
Hydrotreated Light Naphthenic Distillates	64742-53-6	Short-term exposure limit: 10 mg/m ³	

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Country (Legal Basis)	Substance	Identifier	Permissible concentration
Spain	Stearic acid	57-11-4	8-hour daily exposure limit (VLA_ED): 10 mg/m ³ [Stearates (except stearates of toxic metals)]
	Carbon Black	1333-86-4	VLA: VLA_ED 3.5 mg/m ³ (8 hr)
	Calcium Silicate	1344-95-2	TWA: 10 mg/m ³ (synthetic)
	Distillates, Petroleum, Solvent-Dewaxed Heavy Paraffinic	64742-65-0	8-hour daily exposure limit: 5 mg/m ³ (This value is applied to refined mineral oil and not to potential additives in its formulation)
	Distillates, Petroleum, Solvent-Dewaxed Heavy Paraffinic	64742-65-0	15-minute STEL: 10 mg/m ³ (This value is applied to refined mineral oil and not to potential additives in its formulation)
	Hydrotreated Heavy Naphthenic Distillates	64742-52-5	8-hour daily exposure limit (VLA_ED): 5 mg/m ³
	Hydrotreated Heavy Paraffinic Distillates	64742-54-7	8-hour daily exposure limit (VLA_ED): 5 mg/m ³ (refined mineral oil, mist)
	Hydrotreated Heavy Naphthenic Distillates	64742-52-5	15-minute STEL (VLA-EC): 10 mg/m ³
	Hydrotreated Heavy Paraffinic Distillates	64742-54-7	15-minute STEL (VLA-EC): 10 mg/m ³ (refined mineral oil, mist)
	Hydrotreated Light Naphthenic Distillates	64742-53-6	8-hour TWA: 5 mg/m ³ (Refined mineral oil, mist)
	Hydrotreated Light Naphthenic Distillates	64742-53-6	15-minute STEL: 10 mg/m ³ (Refined mineral oil, mist)
	Heptane	142-82-5	8-hour daily exposure limit (VLA_ED): 500 ppm (2085 mg/m ³)
	Zinc oxide	1314-13-2	8-hour daily exposure limit (VLA_ED): 2 mg/m ³
	Zinc oxide	1314-13-2	15-minute STEL (VLA-EC): 10 mg/m ³
Croatia	Carbon Black	1333-86-4	Dangerous Substances Exposure Limit Values in the Workplace: 3.5 mg/m ³ (8hr); 7.0 mg/m ³ (15 min)
	Heptane	142-82-5	Maximum (8 hr) allowable concentration: 500 ppm (2085 mg/m ³)
	Zinc oxide	1314-13-2	Maximum (8 hr) allowable concentration: 2 mg/m ³
	Zinc oxide	1314-13-2	Short-term (15 min) allowable concentration: 10 mg/m ³
	Calcium Silicate	1344-95-2	Maximum (8 hr) allowable concentration: 10 mg/m ³ (Total dust)
	Calcium Silicate	1344-95-2	Maximum (8 hr) allowable concentration: 4 mg/m ³ (Respirable dust)
Cyprus	Carbon Black	1333-86-4	Control of factory atmosphere and dangerous substances in factories regulation: TWA 3.5 mg/m ³ (8 hr)

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Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Heptane	142-82-5	8-Hour TWA: 2085 mg/m ³ (500 ppm)
	Zinc oxide	1314-13-2	8-hour TWA: 5.0 mg/m ³ (Fumes)
Sweden	Stearic acid	57-11-4	Level Limit Value (NGV): 5 mg/m ³ (as stearates, total dust)
	Distillates, Petroleum, Solvent-Dewaxed Heavy Paraffinic	64742-65-0	Level limit value: 1 mg/m ³ (Oil mist, including oil fume)
	Distillates, Petroleum, Solvent-Dewaxed Heavy Paraffinic	64742-65-0	Short term limit value: 3 mg/m ³ (Oil mist, including oil fume)
	Hydrotreated Heavy Naphthenic Distillates	64742-52-5	Level Limit Value (NGV): 1 mg/m ³ (Oil mist including oil fume)
	Hydrotreated Heavy Paraffinic Distillates	64742-54-7	Level Limit Value (NGV): 1 mg/m ³ (Oil mist including oil fume)
	Hydrotreated Heavy Naphthenic Distillates	64742-52-5	Short Term Limit (KTV): 3 mg/m ³ (Oil mist including oil fume)
	Hydrotreated Heavy Paraffinic Distillates	64742-54-7	Short Term Limit (KTV): 3 mg/m ³ (Oil mist including oil fume)
	Carbon Black	1333-86-4	8-hour TWA: 3 mg/m ³
	Zinc oxide	1314-13-2	Level Limit Value (NGV): 5 mg/m ³ (fume or respirable dust)
	Heptane	142-82-5	Short Term Limit (KTV): 300 ppm (1200 mg/m ³) - Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2018:1)
	Heptane	142-82-5	Level Limit Value (NGV): 200 ppm (800 mg/m ³) - Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2018:1)
	Hydrotreated Light Naphthenic Distillates	64742-53-6	Level Limit Value (NGV): 1 mg/m ³ (Oil mist including oil fume)
	Hydrotreated Light Naphthenic Distillates	64742-53-6	Short Term Limit (KTV): 3 mg/m ³ (Oil mist including oil fume)
Slovakia	Carbon Black	1333-86-4	Regulation No. 355.2006 concerning protection of workers exposed to chemical agents, Annex 1: TWA (NPEL) 2.0 mg/m ³
	Distillates, Petroleum, Solvent-Dewaxed Heavy Paraffinic	64742-65-0	8-hour TWA: 5 ppm (liquid mineral oil mist, fumes)
	Hydrotreated Heavy Paraffinic Distillates	64742-54-7	8-hour TWA (NPEL): 5 ppm (Liquid mineral oil mist, fumes)
	Distillates, Petroleum, Solvent-Dewaxed Heavy Paraffinic	64742-65-0	15-minute STEL: 15 ppm (Liquid mineral oil mist, fumes)
	Hydrotreated Heavy Paraffinic Distillates	64742-54-7	15-minute STEL (NPEL): 15 ppm (Liquid mineral oil mist, fumes)
	Hydrotreated Heavy Naphthenic Distillates	64742-52-5	8-hour TWA (NPEL): 5 ppm (1 mg/m ³) [Liquid mineral oil mist, fumes]
	Hydrotreated Heavy Naphthenic Distillates	64742-52-5	15-minute STEL (NPEL): 15 ppm (3 mg/m ³) [Liquid mineral oil mist, fumes]
	Heptane	142-82-5	8-hour TWA (NPEL): 500 ppm (2085 mg/m ³)

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Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Hydrotreated Light Naphthenic Distillates	64742-53-6	8-hour TWA: 1 mg/m ³ (5 ppm [Liquid mineral oil mist, fumes])
	Hydrotreated Light Naphthenic Distillates	64742-53-6	15-minute STEL: 3 mg/m ³ (15 ppm [Liquid mineral oil mist, fumes])
Slovakia	Zinc oxide	1314-13-2	8-hour TWA (NPEL): 1 mg/m ³ [Fumes (Respirable fraction)]
	Zinc oxide	1314-13-2	15-minute STEL (NPEL): 1 mg/m ³ [Fumes (Respirable fraction)]
	Zinc oxide	1314-13-2	8-hour TWA (NPEL): 0.1 mg/m ³ [Zinc and its inorganic compounds (Respirable fraction)]
	Zinc oxide	1314-13-2	8-hour TWA (NPEL): 2 mg/m ³ [Zinc and its inorganic compounds (Inhalable fraction)]
	Calcium Silicate	1344-95-2	8-hour TWA: 10 mg/m ³ (inert dust [particles, insoluble in water, not elsewhere classified])
Estonia	Heptane	142-82-5	8-hour TWA: 500 ppm (2085 mg/m ³)
	Calcium Silicate	1344-95-2	TWA: 10 mg/m ³
	Zinc oxide	1314-13-2	8-hour TWA: 5 mg/m ³
	Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	64742-49-0	8-hour TWA: 1 mg/m ³ (oil; naphtha [vapors])
European Union	Distillates, Petroleum, Solvent-Dewaxed Heavy Paraffinic	64742-65-0	8-hour TWA: 5 mg/m ³ (Severely refined mineral oils, inhalable)
	Hydrotreated Heavy Naphthenic Distillates	64742-52-5	8-Hour TWA: 5 mg/m ³
	Hydrotreated Heavy Paraffinic Distillates	64742-54-7	8-Hour TWA: 5 mg/m ³ (Severely Refined Mineral Oils, inhalable)
	Heptane	142-82-5	IOEL threshold limit: 2085 mg/m ³ (500 ppm)
	Hydrotreated Light Naphthenic Distillates	64742-53-6	8-hour TWA: 5 mg/m ³ (SCOELs [Severely refined mineral oils, inhalable])
	Heptane	142-82-5	SCOEL 8-hour TWA: 500 ppm (2085 mg/m ³)
Denmark	Carbon Black	1333-86-4	Exposure Limits for Substances & Materials: TWA 3.5 mg/m ³
	Distillates, Petroleum, Solvent-Dewaxed Heavy Paraffinic	64742-65-0	TWA: 1 mg/m ³
	Hydrotreated Heavy Naphthenic Distillates	64742-52-5	TWA: 1 mg/m ³
	Hydrotreated Heavy Paraffinic Distillates	64742-54-7	TWA: 1 mg/m ³
	Hydrotreated Light Naphthenic Distillates	64742-53-6	TWA: 1 mg/m ³ (Mineral oils)
	Heptane	142-82-5	TWA: 200 ppm (820 mg/m ³)
	Carbon Black	1333-86-4	STEL: 7 mg/m ³
	Zinc oxide	1314-13-2	8-hour TWA: 4 mg/m ³ (fume or respirable dust)
Finland	Carbon Black	1333-86-4	Workplace Exposure Limits: 3.5 mg/m ³ (8 hr); 7.0 mg/m ³ (15 min)
	Distillates, Petroleum, Solvent-Dewaxed Heavy Paraffinic	64742-65-0	8-hour limit: 5 mg/m ³ (oil mist, mineral)

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Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Hydrotreated Heavy Paraffinic Distillates	64742-54-7	8-hour limit: 5 mg/m ³
	Hydrotreated Heavy Naphthenic Distillates	64742-52-5	8-hour limit: 5 mg/m ³
	Hydrotreated Light Naphthenic Distillates	64742-53-6	8-hour TWA: 5 mg/m ³ (Oil mist, mineral)
Finland	Heptane	142-82-5	8-hour limit: 300 ppm (1200 mg/m ³)
	Heptane	142-82-5	15-minute limit: 500 ppm (2100 mg/m ³)
	Zinc oxide	1314-13-2	8-hour limit: 2 mg/m ³
	Zinc oxide	1314-13-2	15-minute limit: 10 mg/m ³
	Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	64742-49-0	8-hour TWA: 500 mg/m ³ (solvent naphtha, Group 1 arom. <1% n-hexane <5% cyclo and isohexanes <25%)
France	Carbon Black	1333-86-4	Threshold Limit Values (VLEP): Time weighted average (VME) 3.5 mg/m ³
	Heptane	142-82-5	Time weighted average (VME): 400 ppm (1668 mg/m ³)
	Heptane	142-82-5	Short term exposure limit: 500 ppm (2085 mg/m ³)
	Zinc oxide	1314-13-2	Time weighted average (VME): 5 mg/m ³ (Fumes)
	Zinc oxide	1314-13-2	Time weighted average (VME): 10 mg/m ³ (Dusts)
	Calcium Silicate	1344-95-2	8-hour TWA: 5 mg/m ³ (dust, respirable fraction)
	Calcium Silicate	1344-95-2	8-hour TWA: 10 mg/m ³ (dust, inhalable fraction)
Greece	Carbon Black	1333-86-4	Decree 307/1986: TWA 3.5mg/m ³ (8 hr); STEL 7.0 mg/m ³ (15 min)
	Distillates, Petroleum, Solvent-Dewaxed Heavy Paraffinic	64742-65-0	8-hour TWA: 5 mg/m ³ (Paraffin oil [mist])
	Hydrotreated Heavy Naphthenic Distillates	64742-52-5	8-hour TWA: 5 mg/m ³ [Paraffin oil (Mist)]
	Hydrotreated Heavy Paraffinic Distillates	64742-54-7	8-hour TWA: 5 mg/m ³ (Paraffin oil, mist)
	Hydrotreated Light Naphthenic Distillates	64742-53-6	8-hour TWA: 5 mg/m ³ (Paraffin oil [mist])
	Heptane	142-82-5	8-hour TWA: 500 ppm (2000 mg/m ³)
	Heptane	142-82-5	15-minute STEL: 500 ppm (2000 mg/m ³)
	Zinc oxide	1314-13-2	8-hour TWA: 5 mg/m ³ (Fumes)
	Zinc oxide	1314-13-2	15-minute STEL: 10 mg/m ³ (Fumes)
	Calcium Silicate	1344-95-2	8-hour TWA: 10 mg/m ³ (Synthetic, Inhalable)
	Calcium Silicate	1344-95-2	8-hour TWA: 5 mg/m ³ (Synthetic, Respirable)
Malta	Heptane	142-82-5	TWA: 500 ppm (2085 mg/m ³)
Netherlands	Distillates, Petroleum, Solvent-Dewaxed Heavy Paraffinic	64742-65-0	8-hour TWA: 5 mg/m ³ (Mineral oils, mist)

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Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Hydrotreated Heavy Paraffinic Distillates	64742-54-7	8-Hour TWA: 5 mg/m ³ (Mineral oils, mist)
	Hydrotreated Heavy Naphthenic Distillates	64742-52-5	Binding 8-hour TWA: 5 mg/m ³ [Oil mist (Mineral oil)]
	Hydrotreated Light Naphthenic Distillates	64742-53-6	8-hour TWA: 5 mg/m ³ (Oil mist [mineral oil])
	Heptane	142-82-5	Binding 8-hour TWA: 1200 mg/m ³
	Heptane	142-82-5	Binding STEL (15 min): 1600 mg/m ³
United Kingdom	Carbon Black	1333-86-4	WEL: TWA 3.5 mg/m ³ ; STEL 7.0 mg/m ³
	Calcium Silicate	1344-95-2	8-hour TWA: 10 mg/m ³ (inhalable dust)
	Calcium Silicate	1344-95-2	8-hour TWA: 4 mg/m ³ (respirable dust)
	Zinc oxide	1314-13-2	8-Hour TWA: 5 mg/m ³ (fume or respirable dust)
	Zinc oxide	1314-13-2	STEL: 10 mg/m ³ (fume or respirable dust)
	Heptane	142-82-5	TWA: 500 ppm (2085 mg/m ³)
Slovenia	Heptane	142-82-5	8-hour TWA: 2085 mg/m ³ (500 ppm)
	Heptane	142-82-5	15-Minute STEL: 2085 mg/m ³ (500ppm)
	Zinc oxide	1314-13-2	8-hour TWA: 5 mg/m ³ (Fumes)
	Calcium Silicate	1344-95-2	8-hour TWA: 10 mg/m ³ (dust, inhalable fraction)
	Calcium Silicate	1344-95-2	15-minute STEL: 20 mg/m ³ (dust, inhalable fraction)
	Calcium Silicate	1344-95-2	8-hour TWA: 1.25 mg/m ³ (dust, respirable fraction)
	Calcium Silicate	1344-95-2	15-minute STEL: 2.5 mg/m ³ (dust, respirable fraction)
Germany	Heptane	142-82-5	AGW limit value: 500 ppm (2100 mg/m ³)
	Heptane	142-82-5	AGW Short term (15 min) exposure limit: 500 ppm (2100 mg/m ³)
	Calcium Silicate	1344-95-2	AGW limit value: 1.25 mg/m ³ (General dust limit, respirable fraction)
	Calcium Silicate	1344-95-2	AGW limit value: 10 mg/m ³ (General dust limit, inhalable fraction)
Luxembourg	Heptane	142-82-5	TWA: 500 ppm (2085 mg/m ³)
Austria	Heptane	142-82-5	TWA: 2000 mg/m ³ (500 ppm)
	Heptane	142-82-5	STEL: 8000 mg/m ³ (2000 ppm)
	Zinc oxide	1314-13-2	8-hour TWA: 5 mg/m ³ (fume or respirable dust)
	Calcium Silicate	1344-95-2	8-hour TWA: 5 mg/m ³ (Dust, biologically inert, respirable fraction)
	Calcium Silicate	1344-95-2	15-minute STEL: 10 mg/m ³ (Dust,

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Country (Legal Basis)	Substance	Identifier	Permissible concentration
			biologically inert, respirable fraction)
	Calcium Silicate	1344-95-2	8-hour TWA: 10 mg/m ³ (Dust, biologically inert, inhalable fraction)
	Calcium Silicate	1344-95-2	15-minute STEL: 20 mg/m ³ (Dust, biologically inert, inhalable fraction)

Biological limit values:

No biological exposure limits noted for the ingredient(s).

Derived No Effect Level (DNEL):

Not determined or not applicable.

Predicted No Effect Concentration (PNEC):

Not determined or not applicable.

Information on monitoring procedures:

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls
Biological monitoring may also be appropriate for some substances

8.2 Exposure controls

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Use explosion-proof ventilation equipment.

Personal protection equipment

Eye and face protection:

Safety goggles or glasses, or appropriate eye protection.

Skin and body protection:

Select glove material impermeable and resistant to the substance.

Wear appropriate clothing to prevent any possibility of skin contact.

Glove thickness should be typically greater than 0.35 mm depending on the glove make and model. Always seek advice from glove suppliers.

For continuous contact we recommend nitrile gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified.

Respiratory protection:

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

Use a European Standard EN149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. Comply with the European Standard EN149.

General hygienic measures:

When handling chemical products, do not eat, drink or smoke. Wash hands after handling, before breaks, and at the end of the workday. Avoid contact with skin, eyes and clothing. Wash contaminated clothing before reuse. Perform routine housekeeping.

Environmental exposure controls:

Select controls based on a risk assessment of local conditions.

See section 6 for information on accidental release measures.

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Black Viscous Liquid
Odor	Strong Solvent
Odor threshold	Not determined or not available.
pH	Not determined or not available.
Melting point/freezing point	Not determined or not available.
Initial boiling point/range	190 °F (88 °C)
Flash point (closed cup)	15 °F (-9 °C)
Evaporation rate	>1 (n-BuAC=1)
Flammability (solid, gas)	Not determined or not available.
Upper flammability/explosive limit	6.7% (V)
Lower flammability/explosive limit	1.2% (V)
Vapor pressure	119 mmHg at 20 °C (68 °F)
Vapor density	Not determined or not available.
Density	Not determined or not available.
Relative density	0.74 g/cm ³ (6.26 lbs./gal) at 20 °C (68 °F)
Solubilities	Not determined or not available.
Partition coefficient (n-octanol/water)	Not determined or not available.
Auto/Self-ignition temperature	Not determined or not available.
Decomposition temperature	Not determined or not available.
Dynamic viscosity	Not determined or not available.
Kinematic viscosity	750 cps
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

9.2 Other information

VOC	619 g/L
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SECTION 10: Stability and reactivity

10.1 Reactivity:

Does not react under normal conditions of use and storage.

10.2 Chemical stability:

Stable under normal conditions of use and storage.

10.3 Possibility of hazardous reactions:

None under normal conditions of use and storage.

10.4 Conditions to avoid:

Excess heat, ignition source or flames.

10.5 Incompatible materials:

None known.

10.6 Hazardous decomposition products:

None known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Assessment: Based on available data, the classification criteria are not met.

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Product data: No data available.

Substance data:

Name	Route	Result
Carbon Black	oral	LD50 Rat: >15,400 mg/kg
	dermal	LD50 Rabbit: >3000 mg/kg
Sulfur	dermal	LD50 Rabbit: > 2,000 mg/kg
Diesel Fuel No. 2	inhalation	LC50 Rat: 3.6 mg/L (4 hr)
	oral	LD50 Rat: 17,900 mg/kg
Stearic acid	dermal	LD50 Rabbit: 5000 mg/kg
Distillates, Petroleum, Solvent-Dewaxed Heavy Paraffinic	oral	LD50 Rat: > 5000 mg/kg
	dermal	LD50 Rabbit: > 5000 mg/kg
	inhalation	LC50 Rat: 2.18 mg/L
Hydrotreated Light Naphthenic Distillates	dermal	LD50 Rabbit: > 5000 mg/kg
	oral	LD50 Rat: > 5000 mg/kg
	inhalation	LC50 Rat: 2.18 mg/L (4 hr)
Hydrotreated Heavy Naphthenic Distillates	dermal	LD50 Rabbit: > 5000 mg/kg
	oral	LD50 Rat: > 5000 mg/kg
Hydrotreated Heavy Paraffinic Distillates	dermal	LD50 Rabbit: >5000 mg/kg
	oral	LD50 Rat: >5000 mg/kg
	inhalation	LC50 Rat: >5 mg/L (4 hr) (mist)
Zinc oxide	oral	LD50 Rat: > 5000 mg/kg
	dermal	LD50 Rat: > 2000 mg/kg
	inhalation	LC50 Rat: > 5.7 mg/L (4 hr, aerosol)
Benzothiazole Disulfide	dermal	LD50 Rabbit: >7940 mg/kg
	oral	LD50 Rat: >12,000 mg/kg
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	oral	LD50 Rat: > 5000 mg/kg
	dermal	LD50 Rabbit: > 2000 mg/kg
	inhalation	LC50 Rat: > 4.42 mg/L (4 hr, vapor)
Heptane	inhalation	LC50 Rat: > 29.29 mg/L (4 hr)
	oral	LD50 Rat: > 5000 mg/kg
	dermal	LD50 Rabbit: > 2000 mg/kg

Skin corrosion/irritation

Assessment:

Causes skin irritation

Product data:

No data available.

Substance data:

Name	Result
Heptane	Causes skin irritation.
Diesel Fuel No. 2	Causes skin irritation.
Sulfur	Causes skin irritation.
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Causes skin irritation.

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Serious eye damage/irritation

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data:

Name	Result
Diesel Fuel No. 2	Causes serious eye irritation.
Calcium Silicate	Causes serious eye irritation.

Respiratory or skin sensitization

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data:

Name	Result
Benzothiazole Disulfide	May cause an allergic skin reaction.

Carcinogenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Species	Result
Carbon Black	Not applicable.	The carcinogenic classification only applies to airborne, unbound particles of respirable size.
Distillates, Petroleum, Solvent-Dewaxed Heavy Paraffinic	Not applicable.	The classification as a carcinogen need not apply if it can be shown that the substance contains less than 3 % DMSO extract as measured by IP 346.
Hydrotreated Light Naphthenic Distillates	Not applicable.	The classification as a carcinogen need not apply if it can be shown that the substance contains less than 3 % DMSO extract as measured by IP 346.
Hydrotreated Heavy Naphthenic Distillates	Not applicable	The classification as a carcinogen need not apply if it can be shown that the substance contains less than 3 % DMSO extract as measured by IP 346.
Hydrotreated Heavy Paraffinic Distillates	Not applicable.	The classification as a carcinogen need not apply if it can be shown that the substance contains less than 3 % DMSO extract as measured by IP 346.
Diesel Fuel No. 2	Not applicable	Suspected of causing cancer.
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Not applicable	The carcinogenic classification applies to naphtha streams containing >0.1% Benzene.

International Agency for Research on Cancer (IARC):

Name	Classification
Carbon Black	Group 2B - Possibly carcinogenic to humans
Diesel Fuel No. 2	Group 3

Germ cell mutagenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

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Substance data:

Name	Result
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	The mutagenic classification applies to naphtha streams containing >0.1% Benzene.

Reproductive Toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data:

Name	Result
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	The classification as a reproductive toxicant only applies when the naphtha stream contains >3% toluene and/or n-hexane.

Specific target organ toxicity (single exposure)

Assessment:

May cause drowsiness or dizziness

Product data:

No data available.

Name	Result
Calcium Silicate	May cause respiratory irritation.
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	May cause drowsiness or dizziness.
Heptane	May cause drowsiness or dizziness.

Specific target organ toxicity (repeated exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data:

Name	Result
Diesel Fuel No. 2	May be fatal if swallowed and enters airways.
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	May be fatal if swallowed and enters airways.
Heptane	May be fatal if swallowed and enters airways.

Information on likely routes of exposure:

No data available.

Symptoms related to the physical, chemical and toxicological characteristics:

Refer to Section 4 of this SDS.

Other information:

No data available.

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SECTION 12: Ecological information

12.1 Toxicity

Acute (short-term) toxicity

Assessment:

Toxic to aquatic life

Product data: No data available.

Substance data:

Name	Result
Zinc oxide	EC50 Daphnia magna: 0.86 mg/L (48 hr)
	LC50 Thymallus arcticus: 0.112 mg/L (96 hr)
Benzothiazole Disulfide	EC50 Daphnia magna: 82 mg/L (48 hr)
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	ErC50 Selenastrum capricornutum: 3.1 mg/L (72 hr)
	EC50 Daphnia magna: 4.5 mg/L (48 hr)
Heptane	EC50 Daphnia magna: 1.5 mg/L (48 hr)

Chronic (long-term) toxicity

Assessment:

Toxic to aquatic life with long lasting effects

Product data: No data available.

Name	Result
Diesel Fuel No. 2	NOEC Oncorhynchus mykiss: 0.083 mg/L (14 d)
	NOEC Daphnia magna: 0.2 mg/L (21 d)
Benzothiazole Disulfide	NOEC Daphnia magna: 0.0001 mg/L (21 d)
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	EC50 Daphnia magna: 10 mg/L (10 days)
Heptane	NOEC Oncorhynchus mykiss: 1.28 mg/L (28 days)

12.2 Persistence and degradability

Product data: No data available.

Substance data:

Name	Result
Carbon Black	The substance will not be biodegraded.
Diesel Fuel No. 2	Readily biodegradable.
Benzothiazole Disulfide	Not readily biodegradable.
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Standard tests for this endpoint are intended for single substances and are not appropriate for this complex substance (UVCB).
Heptane	Readily biodegradable in water.

12.3 Bioaccumulative potential

Product data: No data available.

Substance data:

Name	Result
Carbon Black	Bioaccumulation is not expected to occur.
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Standard tests for this endpoint are intended for single substances and are not appropriate for this complex substance (UVCB).
Heptane	Calculated BCF: 552 (Not expected to bioaccumulate).

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12.4 Mobility in soil

Product data: No data available.

Substance data:

Name	Result
Heptane	Moderately Mobile (Koc: 239.7 L/kg)

12.5 Results of PBT and vPvB assessment

PBT assessment:

Carbon Black	This substance is not PBT.
Zinc oxide	PBT assessment does not apply to inorganic substances.
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	This substance is not PBT.
Heptane	This substance is not PBT.

vPvB assessment:

Carbon Black	This substance is not vPvB.
Zinc oxide	vPvB assessment does not apply to inorganic substances.
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	This substance is not vPvB.
Heptane	This substance is not vPvB.

12.6 Other adverse effects: No data available.

SECTION 13: Disposal considerations



13.1 Waste treatment methods

Relevant information:

Consult with EU Directive 2008/98/EC for the classifications of hazardous waste prior to disposal. Furthermore, consult with your regional, national or European waste requirements or guidelines, if applicable, to ensure compliance. Final decisions on the appropriate waste management method, in line with regional, national and European legislation, remains the responsibility of the waste treatment operator

SECTION 14: Transport information

International Carriage of Dangerous Goods by Road/Rail (ADR/RID)

UN number	1133
UN proper shipping name	Adhesives
UN transport hazard class(es)	3  
Packing group	II
Environmental hazards	Marine Pollutant (Heptane and Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics)
Special precautions for user	None

Safety Data Sheet

According to Regulation (EC) No. 1272/2008 (CLP), as amended by Commission Regulation (EU) 2019/521 and Commission Delegated Regulation (EU) 2020/217, and (EC) No. 1907/2006 (REACH)



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International Carriage of Dangerous Goods by Inland Waterways (ADN)

UN number	1133
UN proper shipping name	Adhesives
UN transport hazard class(es)	3  
Packing group	II
Environmental hazards	Marine Pollutant (Heptane and Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics)
Special precautions for user	None

International Maritime Dangerous Goods (IMDG)

UN number	1133
UN proper shipping name	Adhesives
UN transport hazard class(es)	3  
Packing group	II
Environmental hazards	Marine Pollutant (Heptane and Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics)
Special precautions for user	None

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN number	1133
UN proper shipping name	Adhesives
UN transport hazard class(es)	3  
Packing group	II
Environmental hazards	Marine Pollutant (Heptane and Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics)
Special precautions for user	None

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

Bulk Name	None
Ship type	None
Pollution category	None

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture.

European regulations

Inventory listing (EINECS):

7704-34-9	Sulfur	Listed
1333-86-4	Carbon Black	Listed
68476-34-6	Diesel Fuel No. 2	Listed
57-11-4	Stearic acid	Listed
1344-95-2	Calcium Silicate	Listed

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64742-65-0	Distillates, Petroleum, Solvent-Dewaxed Heavy Paraffinic	Listed
64742-53-6	Hydrotreated Light Naphthenic Distillates	Listed
64742-52-5	Hydrotreated Heavy Naphthenic Distillates	Listed
64742-54-7	Hydrotreated Heavy Paraffinic Distillates	Listed
1314-13-2	Zinc oxide	Listed
120-78-5	Benzothiazole Disulfide	Listed
64742-49-0	Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Listed
142-82-5	Heptane	Listed

REACH SVHC candidate list: None of the ingredients are listed.

REACH SVHC Authorizations: None of the ingredients are listed.

REACH Restriction: None of the ingredients are listed.

Water hazard class (WGK) (Product): Not determined.

Water hazard class (WGK) (Substance):

Ingredient Name	CAS	Class
Carbon Black	1333-86-4	Non-hazardous to water.
Diesel Fuel No. 2	68476-34-6	2
Stearic acid	57-11-4	Non-hazardous to water.
Calcium Silicate	1344-95-2	1
Sulfur	7704-34-9	1
Distillates, Petroleum, Solvent-Dewaxed Heavy Paraffinic	64742-65-0	1
Hydrotreated Light Naphthenic Distillates	64742-53-6	1
Hydrotreated Heavy Naphthenic Distillates	64742-52-5	1
Hydrotreated Heavy Paraffinic Distillates	64742-54-7	1
Zinc oxide	1314-13-2	2
Benzothiazole Disulfide	120-78-5	2
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	64742-49-0	2
Heptane	142-82-5	2

Other regulations

Germany TA Luft: None of the ingredients are listed.

Germany MAK: Hydrotreated Light Naphthenic Distillates: 8-hour TWA: 5 mg/m³ (Mineral oils, highly refined), Distillates, Petroleum, Solvent-Dewaxed HeavyParaffinic: 8-hour TWA: 5 mg/m³, Heptane: 8-hour TWA: 500 ppm (2100 mg/m³), Zinc oxide: 8-hour TWA: 0.1 mg/m³ [Zinc and its inorganic compounds (respirable fraction)], Zinc oxide: 8-hour TWA: 2 mg/m³ [Zinc and its inorganic compounds (inhalable fraction)], Zinc oxide: 15-minute STEL: 0.4 mg/m³ [Zinc and its inorganic compounds (respirable fraction)], Zinc oxide: 15-minute STEL: 4 mg/m³ [Zinc and its inorganic compounds (inhalable fraction)]Hydrotreated Heavy Paraffinic Distillates: 8-hour TWA: 5 mg/m³ (mineral oils, highly refined [inhalable fraction]), Calcium Silicate: 8-hour TWA: 4 mg/m³ (dust, inhalable fraction)

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

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SECTION 16: Other information

Indication of changes:

January 12, 2022: Updated classification; updated occupational exposure limits; updated Section 3.

September 3, 2020: Reviewed/Updated to comply with the 12th and 14th Adaptation to Technical Progress (ATP) of the CLP Regulation. Composition update, resulting in updated occupational exposure limits

Abbreviations and Acronyms: None

Classification procedure:

Classification according to Regulation (EC) No. 1272/2008 (CLP)	Method Used
Flammable liquids, category 2	Calculation method
Skin irritation, category 2	Calculation method
Skin sensitization, category 1	Calculation method
Specific target organ toxicity - single exposure, category 3, central nervous system	Calculation method
Chronic aquatic hazard, category 2	Calculation method

Summary of classification(s) in section 3:

Stot SE 3; H336	Specific target organ toxicity - single exposure, category 3, central nervous system
Asp. Tox. 1; H304	Aspiration hazard, category 1
Aquatic Chronic 2; H411	Chronic aquatic hazard, category 2
Skin Irrit. 2 ; H315	Skin irritation, category 2
Flam. Liq. 2; H225	Flammable liquids, category 2
Aquatic Acute 1; H400	Acute aquatic hazard, category 1
Aquatic Chronic 1; H410	Chronic aquatic hazard, category 1
Eye Irrit. 2; H319	Eye irritation, category 2A
Stot SE 3; H335	Specific target organ toxicity - single exposure, category 3, respiratory irritation
Skin Sens. 1; H317	Skin sensitization, category 1
Carc. 2; H351	Carcinogenicity, category 2
Flam. Liq. 3; H226	Flammable liquids, category 3
Acute Tox. 4; H332	Acute toxicity (inhalation), category 4

Summary of hazard statements in section 3:

H336	May cause drowsiness or dizziness
H304	May be fatal if swallowed and enters airways
H411	Toxic to aquatic life with long lasting effects
H315	Causes skin irritation
H225	Highly flammable liquid and vapour
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H317	May cause an allergic skin reaction
H351	Suspected of causing cancer
H226	Flammable liquid and vapour
H332	Harmful if inhaled

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Disclaimer:

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End of Safety Data Sheet